1   1.   (AMENDED)   A method for provisioning services to
2   packets sourced from a number of client devices, each of
3   the packets having at least a part of a layer 2 header
4   replaced with a unique bit string that is independent of a
5   layer 2 destination address, the method comprising:
6   a)   determining whether or not the packet is entitled
7   to access a particular service using at least a
8   portion of the unique bit string; and
9   b)   if it is determined that the packet is entitled to
10   access the particular service, then routing the
11   packet.

Please replace claim 3 with the following:

1   3.   (AMENDED)   The method of claim 1 wherein at least a
2   portion of the unique bit string corresponds to a virtual
3   private network-organizational universal identifier.

[Please replace claim 4 with the following:]

1   4.   (AMENDED)   The method of claim 1 wherein at least a
2   portion of the unique bit string corresponds to a virtual
3   private network-INDEX.

[Please replace claim 5 with the following:]

1   5.   (AMENDED)   A method for providing various quality of
2   service levels to packets sourced from a number of client
3   devices, each of the packets having at least a part of a
4   layer 2 header replaced with a unique bit string that is
5   independent of a layer 2 destination address, the method
6   comprising:

2

7   a)   determining a service level to which the packet is

        8   entitled using at least a portion of the unique bit

        9   string; and

       10   b)   forwarding the packet to a queue associated with

       11   the service level determined.

        [Please replace claim 7 with the following:]

        1   7.   (AMENDED)   The method of claim 5 wherein at least a

        2   portion of the unique bit string corresponds to a virtual

        3   private network-organizational universal identifier.

        [Please replace claim 8 with the following:]

        1   8.   (AMENDED)   The method of claim 5 wherein at least a

        2   portion of the unique bit string corresponds to a virtual

        3   private network-INDEX.

        [Please replace claim 9 with the following:]

        1   9.   (AMENDED)   A method for monitoring packets sourced from

        2   a group of client devices defining a subset of client

        3   devices, each of the packets having at least a part of a

        4   layer 2 header replaced with a unique bit string, the

        5   method comprising:

        6   a)   determining whether or not the packet belongs to

        7   the group of client devices using at least a portion

        8   of at least one of the unique bit string; and

        9   b)   if it is determined that the packet does belong to

       10   the group of client devices, then

       11   i)   copying the packet to generate a duplicate

       12   packet, and

3

13   ii)   forwarding the duplicate packet to a

14   monitoring facility.

Please replace claim 11 with the following:

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1   11. (AMENDED) The method of claim 9 wherein at least a

2 portion of the unique bit string corresponds to a virtual

3 private network-organizational universal identifier.

[Please replace claim 12 with the following:]

1   12. (AMENDED) The method of claim 9 wherein at least a

2 portion of the unique bit string corresponds to a virtual

3 private network-INDEX.

[Please replace claim 13 with the following:]

1   13. (AMENDED) An apparatus for provisioning services to

2 packets sourced from a number of client devices, each of

3 the packets having at least a part of a layer 2 header

4 replaced with a unique bit string, the apparatus

5 comprising:

6   a) an access control list; and

7   b) an access controller, the access controller

8   including

9   i) means for determining whether or not the

10   packet is entitled to access a particular service

11   using

12   A) contents of the access control list, and

13   B) at least a portion of the unique bit

14   string, and

15   ii)   means for routing the packet if it is

16   determined that the packet is entitled to access

17   the particular service.

[Please replace claim 14 with the following:]

1   14.   (AMENDED)   An apparatus for providing various service

2   levels to packets sourced from a number of client devices,

3   each of the packets having at least a part of a layer 2

4   header replaced with a unique bit string that is

5   independent of a layer 2 destination address, the apparatus

6   comprising:

7   a)   a plurality of queues, each of the plurality of

8   queues associated with a particular service level;

9   b)   a service level list; and

10   c)   a service level controller, the service level

11   controller including

12   i)   means for determining a service level to

13   which the packet is entitled using

14   A)   contents of the service level list, and

15   B)   at least a portion of the unique bit

16   string, and

17   ii)   means for forwarding the packet to the one

18   of the plurality of queues associated with the

19   quality of service level determined.

[Please replace claim 15 with the following:]

1   15.   (AMENDED)   An apparatus for monitoring packets sourced

2   from a group of client devices defining a subset of client

3   devices, each of the packets having at least a part of a

5

4   layer 2 header replaced with a unique bit string, the

5   apparatus comprising:

6   a)   a monitoring port for accepting packets of the

7   group of client devices to be monitored;

8   b) means determining whether or not an accepted

9   packet belongs to the group of client devices using at

10   least a portion of the unique bit string; and

11   c) means for

12   i) copying the accepted packet to generate a

13   duplicate packet, and

14   ii) forwarding the duplicate packet to the

15   monitoring port,

16   if it is determined that the packet was sourced

17   by a client device belonging to the group of

18   client devices.

Please add the following new claims:

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1   16.   (NEW) The method of claim 1 wherein the layer 2

2   header is an Ethernet header, wherein when the unique bit

3   string replaces the at least a part of the layer 2 header a

4   modified header is generated, and wherein a bit-size of the

5   modified header is the same as that of the Ethernet header.

1   17.   (NEW) The method of claim 1 wherein at least a

2   portion of the unique bit string represents a logical port

3   identifier including a geographic location identifier and a

4   physical unit identifier.

1   18.   (NEW) The method of claim 5 wherein the layer 2

2   header is an Ethernet header, wherein when the unique bit

3   string replaces the at least a part of the layer 2 header a

4 modified header is generated, and wherein a bit-size of the
5 modified header is the same as that of the Ethernet header.

1 19.   (NEW)   The method of claim 5 wherein at least a
2 portion of the unique bit string represents a logical port
3 identifier including a geographic location identifier and a
4 physical unit identifier.

1 20.   (NEW)   The method of claim 9 wherein the unique bit
2 string is independent of a layer 2 destination address.

1 21.   (NEW)   The method of claim 9 wherein the layer 2
2 header is an Ethernet header, wherein when the unique bit
3 string replaces the at least a part of the layer 2 header a
4 modified header is generated, and wherein a bit-size of the
5 modified header is the same as that of the Ethernet header.

1 22.   (NEW)   The method of claim 9 wherein at least a
2 portion of the unique bit string represents a logical port
3 identifier including a geographic location identifier and a
4 physical unit identifier.

1 23.   (NEW)   The method of claim 13 wherein the unique bit
2 string is independent of a layer 2 destination address.

1 24.   (NEW)   The method of claim 13 wherein the layer 2
2 header is an Ethernet header, wherein when the unique bit
3 string replaces the at least a part of the layer 2 header a
4 modified header is generated, and wherein a bit-size of the
5 modified header is the same as that of the Ethernet header.

1 25. (NEW) The method of claim 13 wherein at least a
2 portion of the unique bit string represents a logical port
3 identifier including a geographic location identifier and a
4 physical unit identifier.

1 26. (NEW) The method of claim 14 wherein the layer 2
2 header is an Ethernet header, wherein when the unique bit
3 string replaces the at least a part of the layer 2 header a
4 modified header is generated, and wherein a bit-size of the
5 modified header is the same as that of the Ethernet header.

1 27. (NEW) The method of claim 14 wherein at least a
2 portion of the unique bit string represents a logical port
3 identifier including a geographic location identifier and a
4 physical unit identifier.

1 28. (NEW) The method of claim 15 wherein the unique bit
2 string is independent of a layer 2 destination address.

1 29. (NEW) The method of claim 15 wherein the layer 2
2 header is an Ethernet header, wherein when the unique bit
3 string replaces the at least a part of the layer 2 header a
4 modified header is generated, and wherein a bit-size of the
5 modified header is the same as that of the Ethernet header.

1 30. (NEW) The method of claim 15 wherein at least a
2 portion of the unique bit string represents a logical port
3 identifier including a geographic location identifier and a
4 physical unit identifier.

        In accordance with 37 C.F.R. § 1.121(c)(ii), a
separate sheet(s) with the rewritten claims marked-up to